## 3.9 NOISE

This section contains a summary of the information based on the *SR-22/West Orange County Connection (SR-22/WOCC) Traffic Noise Impact Technical Report* and the *Reduced Build Alternative Traffic Noise Impact Technical Report Addendum* (December 2000), *Traffic Noise Impact Technical Report (Revised) Addendum* (December 2002), *Traffic Noise Impact Technical Report Rossmoor Addendum* (September 2002), *Traffic Noise Impact Technical Report Garden Grove Addendum* (October 2002), and Section 3.9 of the August 2001 DEIR/EIS.

The purpose of these Traffic Noise Impact Technical reports is to identify traffic noise impacts associated with proposed transportation improvements as well as potential noise abatement measures, and to meet the requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). These reports were prepared according to Title 23, Part 772 of Federal Regulations, *Procedures for Abatement of Highway Traffic Noise* and Caltrans' noise analysis policy described in *Traffic Noise Analysis Protocol*, October 1998. Therefore, the noise analyses presented in this section and Section 4.9 mainly follows the procedure and methodology described in Caltrans' Traffic Noise Analysis Protocol. Please note that this Protocol was developed in 1998 to fulfill the State and Federal noise analyses and abatement/mitigation requirements.

### 3.9.1 Noise Measurement and Modeling

Within the project study area noise receivers were carefully selected to represent the existing noise-sensitive land uses based on the following criteria:

1. The first row of existing residential land uses located along the freeway right-of-way were selected because they are expected to receive the highest future noise levels over the period covered by the analysis.
2. Other noise-sensitive locations, such as schools and parks, were included.
3. Receivers were selected to represent areas where the roadway was elevated, at-grade, or depressed.
4. Receivers located at different elevations to the roadway were also selected.

Future noise-sensitive land uses were identified using these guidelines. Existing noise levels for these receivers were determined by measurements and modeling. Both short-term (15- to 20-minute) and long-term noise measurements were taken at these noise-sensitive locations. Additional noise-sensitive receiver sites were "modeled" to supplement the measurement sites. These modeling sites represent additional first-row residential receivers, schools, parks and commercial sites where frequent outdoor uses occur, such as outdoor seating for restaurants, outdoor shopping areas or automobile sales lots.

Figure 3.9-1, Noise Measurement Sites, included at the end of this section, correlates to Table 3.9-1, Existing Noise Levels, on the next page. In the figure and table, short-term noise measurement sites are indicated by a single number (1, 2, 3, etc.), while 24-hour measurement sites are indicated by single letter (A, B, C, etc.). Modeled sites are indicated by a hyphenated identifier (1-A, 1-B, G-A, etc.).

### 3.9.2 Existing Noise Levels

Table 3.9-1 (Existing Noise Levels) includes both the existing noise levels based on measurements and the "highest noise hour" based on modeling. Information regarding noise measurement and modeling can be found in the *SR-22/West Orange County Connection (SR-22/WOCC) Traffic Noise Impact Technical Report* and the *Reduced Build Alternative Traffic Noise Impact Technical Report Addendum* (December 2000) and *Traffic Noise Impact Technical Report (Revised) Addendum* (December 2002); these documents are available under separate cover at the Department and OCTA.

**Table 3.9-1**
**EXISTING NOISE LEVELS AT**
**GARDEN GROVE, WESTMINSTER, SANTA ANA, ORANGE AND SEAL BEACH SITES**

| Site ID No. | Site Description<br>*Distances expressed in meters (m) and feet (ft)* | Measured Noise Level (dBA) | Modeled Noise Level (dBA) (highest noise hour) |
|---|---|---|---|
| 1-A | **337 Harvard, College Park West, Seal Beach.** 20-minute measurement taken at 07:25 am. Surrounding area: mainly single-family homes. | 68.1 | 68 Leq(h), dBA |
| 1-G | **224 College Park Drive, Seal Beach.** 20-minute measurement taken at 09:45 am. Surrounding area: mainly single-family homes. | 63.1 | --- |
| 1-K | **409 Purdue Circle, College Park West, Seal Beach.** 20-minute measurement taken at 08:35 am. Surrounding area: mainly single-family homes. | 59.6 | --- |
| -- | **Blue Bell Park, Almond Avenue, Seal Beach.** Modeled. Community park in single-family residential area. Primary use is community and recreational. | --- | 67 Leq(h), dBA |
| B | **3521 Columbine Street, Seal Beach.** 24-hour measurement taken at Almond Ave. side of house, directly across Almond Ave. from SR-22/I-405 noise barrier, 15m (50 ft) from house. Surrounding area: single-family homes. | 72 Leq(h)<br>75 CNEL | 67 Leq(h), dBA |
| -- | **Almond Park, Almond Avenue, Seal Beach.** Modeled. Community park located in single-family residential area. Primarily use is community and recreational. | --- | 68 Leq(h), dBA |
| 5 | **3550 Sunflower Circle, Seal Beach.** 15-minute measurement taken at 11:30 am on Almond Dr. side of house, across street from SR-22/I-405 noise barrier. Surrounding area: mainly single-family homes. | 63 Leq(h) | 67 Leq(h), dBA |
| 5-A | **3530 Pansy Circle, Seal Beach.** Modeled. Second-row house. Single-family homes. | --- | 67 Leq(h), dBA |
| 5-B | **3560 Wisteria Street, Seal Beach.** Modeled. Single-family home at end of cul-de-sac. Existing noise barrier on westbound SR-22 to northbound I-405 connector. | --- | 66 Leq(h), dBA |
| 6-a | **Christal Avenue, Garden Grove**. Modeled. Single-family homes. | --- | 74 Leq(h), dBA |
| 6-e | **Christal Avenue, Garden Grove**. Modeled. Single-family homes. | --- | 73 Leq(h), dBA |
| 6-j | **Bailey Street, Garden Grove**. Modeled. Single-family homes. | --- | 66 Leq(h), dBA |
| 7 | **Garden Grove Boulevard at Via Los Alisos, Westminster.** 15-minute measurement taken at 1:40 pm along Garden Grove Blvd. at the 1.8m (6-ft) privacy wall behind mobile homes, beyond a 12m-wide (40-ft-wide) swath of grass/shrubs separating Garden Grove Blvd. and SR-22. No existing noise barrier. Surrounding area: mobile homes. | 71 Leq(h) | 73 Leq(h), dBA |
| C | **Anthony Avenue at Chase Street, Garden Grove.** 24-hour measurement taken at rear of home, 27m (90 ft) from SR-22, separated by 1.8m (6-ft) privacy wall. Surrounding area: single-family homes. | 76 Leq(h)<br>76 CNEL | 74 Leq(h), dBA |
| 8 | **6282 Anthony Avenue, Garden Grove.** 15-minute measurement taken at 2:15 pm at the back of the house, behind 1.8m (6-ft) privacy wall, 27m (90 ft) from SR-22, which is elevated 1.8m (6 ft). No existing noise barrier. Surrounding area: single-family homes. | 72 Leq(h) | 74 Leq(h), dBA |
| 9 | **6732 Anthony Avenue, Garden Grove.** 15-minute measurement taken at 2:50 pm at the back of the house, behind 1.8m (6-ft) privacy wall, 14m (45 ft) from SR-22. No existing noise barrier. Surrounding area: single-family homes. | 71 Leq(h) | 74 Leq(h), dBA |
| 10 | **Yuma Place at Garden Grove Boulevard, Westminster.** 15-minute measurement taken at 10:20 am at 1.2m (4-ft) property wall separating homes from Garden Grove Blvd, across street and 7m (120 ft) from SR-22. No existing noise barrier. Surrounding area: single-family homes. | 71 Leq(h) | 72 Leq(h) |
| 10-A | **Palomar Street, Westminster.** Modeled. Single-family residences. | --- | 72 Leq(h) |

**Table 3.9-1 (continued)**
**EXISTING NOISE LEVELS AT**
**GARDEN GROVE, WESTMINSTER, SANTA ANA, ORANGE AND SEAL BEACH SITES**

| Site ID No. | Site Description<br>*Distances expressed in meters (m) and feet (ft)* | Measured Noise Level (dBA) | Modeled Noise Level (dBA) (highest noise hour) |
|---|---|---|---|
| 11 | **12892 Dumont Street, Garden Grove.** 15-minute measurement taken at 9:20 am at back of house, 18m (60 ft) from SR-22, which is elevated. No existing noise barrier. Surrounding area: single-family homes. | 68 Leq(h) | 71 Leq(h) |
| 12 | **7051 Natal Drive, Sutton Place Apartments, Westminster.** 15-minute measurement taken at 1:15 pm at back of apartments, 18m (60 ft) from SR-22, which is elevated 6m (20 ft). No existing noise barrier. Surrounding area: apartments/multi-family residences. | 58 Leq(h) | 68 Leq(h) |
| M-1 | Modeled. Single-family residences. | --- | 65 Leq(h) |
| M-11 | Modeled. Single-family residences. | --- | 64 Leq(h) |
| 13 | **7721 Benton Avenue, Westminster.** 15-minute measurement taken at 11:00 am at back of house, 23m (75 ft) from SR-22 eastbound off-ramp to Beach Blvd, which is elevated 12m (40 ft). No existing noise barrier. Surrounding area: single-family homes. | 57 Leq(h) | 69 Leq(h) |
| 14 | **8172 Larson Avenue, Garden Grove.** 15-minute measurement taken at 12:20 pm at back of apartment building, 2.4m (8 ft) behind 1.8m (6-ft) privacy wall, separated from SR-22 by 9m (30 ft) of grass/shrubs. No existing noise barrier. Surrounding area: mainly multi-family residences. | 73 Leq(h) | 73 Leq(h) |
| 15 | **13171 Monroe Street, Garden Grove.** 15-minute measurement taken at 3:00 pm in parking lot at back of apartment building, 11m (35 ft) behind 1.8m (6-ft) privacy wall separating parking lot from SR-22. No existing noise barrier. Surrounding area: mainly multi-family residences. | 71 Leq(h) | 70 Leq(h) |
| D | **Central Avenue at Wilson Street, Garden Grove.** 24-hour measurement taken at front of home, 18m (60 ft) from SR-22 noise barrier across Central Avenue. Surrounding area: single-family homes. | 63 Leq(h)<br>67 CNEL | 66 Leq(h) |
| 15-A | **West of Newland Street and north of SR-22, Garden Grove.** Modeled. Mixture of single-family and multi-family residential. Existing 4.3m (14-ft) noise barrier. | --- | 65 Leq(h) |
| 16 | **Edgebrook Drive and Newland Street, Garden Grove.** 15-minute measurement taken at 1:20 pm at back of apartment complex, 8m (25 ft) behind 1.8m (6-ft) privacy wall, with 9m-wide (30-ft-wide) swath of shrubs/trees separating SR-22, which is elevated 9m (30 ft). No noise barrier. Surrounding area: multi-family residences. | 67 Leq(h) | 68 Leq(h) |
| 16-A | **Mar Drive, Garden Grove.** Modeled. Multi-family residences. | --- | 75 Leq(h) |
| 16-B | **Dakota Avenue, Garden Grove.** Modeled. Single-family homes. | --- | 73 Leq(h) |
| 17 | **8871 Boyd Avenue, Garden Grove.** 15-minute measurement taken at 1:45 pm at back of house, 18m (60 ft) from SR-22, which is elevated 6m (20 ft). No existing noise barrier. Surrounding area: single-family residential. | 56 Leq(h) | 66 Leq(h) |
| 18 | **9141 Enloe Way, Garden Grove.** 15-minute measurement taken at 2:10 pm at back of house, 12m (40 ft) from eastbound SR-22 on-ramp at Magnolia St., which is elevated. No existing noise barrier. Surrounding area: single-family homes and Garden Grove Park nearby. | 62 Leq(h) | 70 Leq(h) |
| -- | **Bolsa Grande High School, Westminster Avenue, Garden Grove.** Modeled at school playfield. High school and park located in single-family residential community. Park uses are primarily community and recreational. | --- | 69 Leq(h) |
| -- | **Bolsa Grande High School, Westminster Avenue, Garden Grove.** Modeled at closest school building to SR-22. | --- | 60 Leq(h) |
| 19 | **9531 Mallard Drive, Garden Grove.** 15-minute measurement taken at 9:45 am at back of house, 9m (30 ft) behind 1.8m (6-ft) privacy wall, with trees/shrubs separating SR-22, which is slightly elevated. No existing noise barrier. Surrounding area: single-family homes and Bolsa Grande High School nearby. | 65 Leq(h) | 68 Leq(h) |

**Table 3.9-1 (continued)**
**EXISTING NOISE LEVELS AT**
**GARDEN GROVE, WESTMINSTER, SANTA ANA, ORANGE AND SEAL BEACH SITES**

| Site ID No. | Site Description<br>*Distances expressed in meters (m) and feet (ft)* | Measured Noise Level (dBA) | Modeled Noise Level (dBA) (highest noise hour) |
|---|---|---|---|
| 20 | **9711 Mallard Drive, Garden Grove.** 15-minute measurement taken at 10:00 am at back of house, 18m (60 ft) from SR-22. No existing noise barrier. Surrounding area: single-family homes and Jordan Intermediate School playfield adjoining this location. | 62 Leq(h) | 69 Leq(h) |
| -- | **Jordan Intermediate School, 9821 Woodbury Road, Garden Grove.** Modeled at nearest school building to SR-22. | --- | 69 Leq(h) |
| -- | **Excelsior Elementary School, 10421 Woodbury Road, Garden Grove.** Modeled at playfields. School located in single-family residential community. | --- | 70 Leq(h) |
| -- | **Excelsior Elementary School, 10421 Woodbury Road, Garden Grove.** Modeled at closest school building to SR-22. | --- | 66 Leq(h) |
| 21 | **13581 Hope Street, Garden Grove.** 15-minute measurement taken at 11:00 am at end of cul-de-sac, 12m (40 ft) from SR-22, which is elevated 4.6m (15 ft). No existing noise barrier. Surrounding area: single-family homes. | 64 Leq(h) | 72 Leq(h) |
| E | **10671 Mallard Drive, Garden Grove.** 24-hour measurement taken at back of house, 20m (65 ft) from SR-22, which is elevated. No existing noise barrier. Surrounding area: single-family homes. | 71 Leq(h)<br>74 CNEL | 71 Leq(h) |
| 21-A | **Fernwood Drive, Garden Grove.** Modeled. Single-family homes. | --- | 72 Leq(h) |
| 22 | **13592 Lanning Street, Garden Grove.** 15-minute measurement taken at 11:30 am at end of cul-de-sac, 18m (60 ft) from SR-22, which is elevated 9m (30 ft). No existing noise barrier. Surrounding area: single-family homes. | 64 Leq(h) | 68 Leq(h) |
| 22-A | **Lanning Street, Garden Grove.** Modeled. Single-family homes. Second-row receivers. | --- | 65 Leq(h) |
| 22-B | **Trask Avenue, Garden Grove.** Modeled single-family residential | --- | 70 Leq(h) |
| 23 | **11930 Banner Drive, Garden Grove.** 15-minute measurement taken at 2:00 pm in front yard of home, separated from SR-22 by 170-180m (560-590 ft) of parking lot and grass/trees. No existing noise barrier. Surrounding area: single-family homes. | 69 Leq(h) | 66 Leq(h) |
| 23-A | **Garden View Apartment Homes, Garden Grove.** Modeled. Multi-family residences. | --- | 72 Leq(h) |
| 24 | **Pearce Avenue at Rainbow Street, Garden Grove.** 15-minute measurement taken at 1:30 pm at back of home 12m (40 ft) behind existing noise barrier. Surrounding area: single-family homes. | 61 Leq(h) | 66 Leq(h) |
| 25 | **12391 Pearce Street, Garden Grove.** 15-minute measurement taken at 12:45 pm at back of house, 8m (25 ft) behind existing noise barrier. Surrounding area: single-family homes. | 64 Leq(h) | 67 Leq(h) |
| F | **13102 Partridge Street, Thunderbird Mobile Home Park, Garden Grove.** 24-hour measurement taken at back of mobile home park, 9m (30 ft) behind SR-22 noise barrier. Surrounding area: mobile homes. | 68 Leq(h)<br>71 CNEL | 66 Leq(h) |
| -- | **Eisenhower Elementary School Playground, School Drive, Garden Grove.** Modeled. School located in single-family/multi-family residential area. | --- | 66 Leq(h) |
| -- | **Eisenhower Elementary School Playground, School Drive, Garden Grove.** Modeled at nearest school building to SR-22. | --- | 67 Leq(h) |
| 26 | **13096 Roberta Place, Garden Grove.** 15-minute measurement taken at 1:30 pm at back of house, 14m (45 ft) from SR-22, behind existing noise barrier. Surrounding area: single-family homes. | 61 Leq(h) | 66 Leq(h) |
| 27 | **13252 Dunklee Avenue, Garden Grove.** 15-minute measurement taken at 2:15 pm at back of house, 18m (60 ft) from SR-22. No noise barrier. Surrounding area: mainly single-family homes. | 67 Leq(h) | 66 Leq(h) |

**Table 3.9-1 (continued)**
**EXISTING NOISE LEVELS AT**
**GARDEN GROVE, WESTMINSTER, SANTA ANA, ORANGE AND SEAL BEACH SITES**

| Site ID No. | Site Description<br>*Distances expressed in meters (m) and feet (ft)* | Measured Noise Level (dBA) | Modeled Noise Level (dBA) (highest noise hour) |
|---|---|---|---|
| 27-A | **Dunklee Avenue, Garden Grove.** Modeled. Single-family homes. | --- | 73 Leq(h) |
| 27-B | **El Prado Avenue, Garden Grove.** Modeled. Single-family and multi-family residential. | --- | 72 Leq(h) |
| G | **1288 Park Balboa Road, Orange.** 24-hour measurement taken at back of apartments, 70m (230 ft) from rear building wall, which acts as a noise barrier for SR-22. Surrounding area: multi-family residential. | 62 Leq(h)<br>61 CNEL | 63 Leq(h) |
| G-A | **3821 Park Balboa Avenue, Orange.** Modeled. Multi-family residential. | --- | 65 Leq(h) |
| 27-I | **W. Park Balboa Ave, Orange.** Modeled. Multi-family residential. | --- | 64 Leq(h) |
| 40-W | **Marcella Ln, Santa Ana.** Modeled. Multi-family residential. | --- | 66 Leq(h) |
| 28 | **1047 Sherwood Lane, Santa Ana.** 15-minute measurement taken at 10:00 am at side of house facing SR-22, near I-5, 18m (60 ft) from noise barrier located atop a 6m-high (20-ft-high) embankment. Surrounding area: single-family homes. | 63 Leq(h) | 65 Leq(h) |
| 28-A | **City Gardens Apartments, Santa Ana.** Modeled. Multi-family residential. | --- | 68 Leq(h) |
| 28-B | **North Fallbrook Drive, Santa Ana.** Modeled. Park and single-family homes. | --- | 65 Leq(h) |
| 28-C | **Fernwood Drive, Santa Ana.** Modeled. Single-family residential. | --- | 61 Leq(h) |
| 29 | **592 Crest Road, Orange.** 15-minute measurement taken at 11:00 am in front of house across street from noise barrier, with SR-22 depressed at this location. Surrounding area: single-family homes. | 63 Leq(h) | 67 Leq(h) |
| 29-c | **Silktree Circle, Orange.** Modeled. Single-family residential. | --- | 65 Leq(h) |
| 29-M | **Devon Rd., Orange.** Modeled. Single-family residential. | --- | 63 Leq(h) |
| 29-M1 | **Devon Rd., Orange.** Modeled. Single-family residential. | --- | 65 Leq(h) |
| 29-B | **Flower Circle, Orange.** Modeled. Multi-family residential. | --- | 63 Leq(h) |
| 29-C | **The Meridian Apartments, Orange.** Modeled. Multi-family residential. | --- | 67 Leq(h) |
| 29-D | **Parker Street, Orange.** Modeled. Multi-family residential. | --- | 69 Leq(h) |
| 30 | **646 Cypress Street, Orange.** 15-minute measurement taken at 1:00 pm behind apartment complex, 24m (80 ft) from SR-22, which is elevated 8m (25 ft). Surrounding area: multi-family residential. | 64 Leq(h) | 67 Leq(h) |
| 30-A | **The Aspen Apartments, Orange.** Modeled. Multi-family residential. | --- | 68 Leq(h) |
| -- | **Fairhaven Elementary School, 1415 Fairhaven Avenue, Santa Ana.** Modeled at the nearest school building to SR-22. | --- | 69 Leq(h) |
| 31 | **2725 Linwood Street, Santa Ana.** 15-minute measurement taken at 1:45 pm at back of house, 40m (130 ft) from SR-22, which is depressed, with 1.8m (6-ft) privacy wall separating house from freeway. Surrounding area: single-family homes and nearby elementary school. | 61 Leq(h) | 66 Leq(h) |
| H-6 | **Fairway Dr., Orange.** Modeled. Single-family residential. | --- | 70 Leq(h) |
| H-26 | **Greenview, Orange.** Modeled. Single-family residential. | --- | 74 Leq(h) |
| H-29 | **Cambridge, Orange.** Modeled. Church. | --- | 70 Leq(h) |
| 31-A | ***Fairway Drive, Orange.** Modeled. Multi-family residential. | --- | 69 Leq(h) |
| 31-B | **Northridge Street, Orange.** Modeled. Multi-family residential | --- | 73 Leq(h) |
| I | ***372 Jennifer Lane, Orange.** 24-hour measurement taken at back of home, 11m (35 ft) from SR-55 noise barrier, which is atop 1.5m-high (5-ft-high) embankment. Surrounding area: single-family homes. | 66 Leq(h) 69 CNEL | 70 Leq(h) |
| 32 | ***2035 Sterns Avenue, Orange.** 15-minute measurement taken at 2:30 pm at edge of house, 15m (50 ft) behind existing noise barrier along SR-55. Surrounding area: single-family homes. | 62 Leq(h) | 67 Leq(h) |
| 32-A | ***Breezy Way, Orange.** Modeled. Single-family homes. | --- | 68 Leq(h) |

**Table 3.9-1 (continued)**
**EXISTING NOISE LEVELS AT**
**GARDEN GROVE, WESTMINSTER, SANTA ANA, ORANGE AND SEAL BEACH SITES**

| Site ID No. | Site Description<br>*Distances expressed in meters (m) and feet (ft)* | Measured Noise Level (dBA) | Modeled Noise Level (dBA) (highest noise hour) |
|---|---|---|---|
| 32-2 | **Seba Avenue, Orange,** Modeled. Single-family residential. | --- | 66 Leq(h) |
| J | ***Memory Lane, Santa Ana.** 24-hour measurement taken at end of cul-de-sac, in front of homes, 12m (40 ft) from I-5 noise barrier. Surrounding area: single-family homes. | 65 Leq(h)<br>69 CNEL | 65 Leq(h) |
| 33 | ***14300 Clinton Street, Willowick Royal Mobile Home Park, Santa Ana.** 15-minute measurement taken at 9:40 am at side of mobile home park adjacent to former Pacific Electric right-of-way. No major roads nearby. Surrounding area: mobile homes, open space, and golf course nearby. | 51 Leq(h) | 51 Leq(h) |
| 33-A | ***Boyer Avenue, Santa Ana.** Modeled. Single-family residential. | --- | 51 Leq(h) |
| -- | ***Willowick Municipal Golf Course, 3017 West Fifth, Santa Ana.** Public Golf Course. (Note: No roadway noise at this location. "Highest-hour" based on 15-minute measurement for Site No. 33.) | --- | 51 Leq(h) |
| -- | ***Spurgeon Intermediate School, 2701 W. Fifth Street, Santa Ana.** Modeled at the school playfield. No roadway noise at this location. Highest-hour based on 15-minute measurement for site 34. | --- | 56 Leq(h) |
| | ***Spurgeon Intermediate School, 2701 W. Fifth Street, Santa Ana.** Modeled at nearest school building to Pacific Electric right-of-way. No roadway noise at this location. Highest-hour based on 15-minute measurement for site 34. | --- | 56 Leq(h) |
| 34 | ***2230 Seventh Street, Santa Ana.** 15-minute measurement taken at 10:15 am at back of home adjacent to former Pacific Electric right-of-way. Fairview St. is main noise source. Surrounding area: single-family homes. | 56 Leq(h) | 56 Leq(h) |

Note: The "highest" noise hour may be lower than the measured.
* These sites are applicable to Full Build Alternative only.

### 3.9.3 Existing Noise Levels at Rossmoor Area (Seal Beach Boulevard at SR-22 to Katella Avenue at I-605)

A total of 18 short-term and three long-term noise measurements were taken along the north side of SR-22 from Seal Beach Boulevard at the SR-22 to Katella Avenue at I-605, referred to in this document as Rossmoor. Fifteen of the short-term measurements were conducted at residential receivers and three of the measurements at schools. The long-term measurements were conducted at residential receivers. The locations of these measurement sites are shown in Figure 3.9-2. The existing noise environment in the project area is due to traffic on SR-22, I-405, I-605 and local roadways. Existing worst-hour traffic noise levels range from 58 dBA to 71 dBA, depending on the proximity of the receiver to freeway traffic and the presence of an existing state noise barrier or non-state wall between the receiver and the freeway.

Table 3.9-2, Existing Noise Levels at Rossmoor Area Sites, includes both the existing noise levels, based on measurements, and the "highest noise hour" based on modeling. Please refer to *Traffic Noise Impact Technical Report Rossmoor Addendum* (September 2002) for each detail site information.

**Table 3.9-2**
**EXISTING NOISE LEVELS AT ROSSMOOR AREA SITES**

| Site ID No. | Site Description | Type of Development | Measured Noise Level (dBA) | Modeled Noise Level, Leq(h), dBA (highest noise hour) |
|---|---|---|---|---|
| Lee Elementary School | **1181 Foster Road, Rossmoor** | School | 55.1 | 58 |
| 1-15A | **11541 Martha Ann Drive, Rossmoor** | Residential | 62.7 | 67 |
| 1-15B | **3651 Coleridge Drive, Rossmoor** | Residential | 61.6 | 66 |
| 1-24 | **11611 Martha Ann Drive, Rossmoor** | Residential | 63.7 | 68 |
| 1A-15A | **11771 Martha Ann Drive, Rossmoor** | Residential | 58.3 | 62 |
| 1A-15B | **2561 Piedmont Avenue, Rossmoor** | Residential | 57.5 | 61 |
| Weaver Elementary School | **11872 Wemeley Street, Rossmoor** | School | 52.3 | 57 |
| 1B-15A | **12041 Martha Ann Drive, Rossmoor** | Residential | 58.3 | 60 |
| 1B-15B | **2652 St. Albans Drive, Rossmoor** | Residential | 55.2 | 59 |
| 2-15A | **12251 Martha Ann Drive, Rossmoor** | Residential | 59.7 | 62 |
| 2-15B | **2641 Main Way, Rossmoor** | Residential | 58.6 | 59 |
| 2-24 | **12371 Martha Ann Drive, Rossmoor** | Residential | 67 | 68 |
| 2A-15A | **12501 Martha Ann Drive, Rossmoor** | Residential | 68.6 | 70 |
| 2A-15B | **12501 Kensington Road, Rossmoor** | Residential | 62 | 63 |
| Francis Elementary School | **12582 Kensington Road, Rossmoor** | School | 62.2 | 63 |
| 2B-15A | **12701 Martha Ann Drive, Rossmoor** | Residential | 65.4 | 67 |
| 2B-15B | **2642 Copa De Oro Drive, Rossmoor** | Residential | 62.9 | 64 |
| 3A-15A | **12835 Martha Ann Drive, Rossmoor** | Residential | 65.6 | 68 |
| 3-15A | **2962 Yellowtail Drive, Rossmoor** | Residential | 67 | 68 |
| 3-15B | **2951 Yellowtail Drive, Rossmoor** | Residential | 66.8 | 68 |
| 3-24 | **3022 Yellowtail Drive, Rossmoor** | Residential | 69.3 | 71 |

### 3.9.4 Existing Noise Levels at Garden Grove Area (Magnolia Street to Havenwood Dr.)

Both short-term and 24-hour noise measurements were conducted at locations representing noise-sensitive land uses, which are single- and multi-family residences, school playfields and commercial uses with frequent outdoor activity. The area south of Trask Avenue and north of the freeway is mostly commercial, consisting primarily of car dealerships from the westbound off-ramp to Magnolia Street east to Bowen Street.

A total of 11 short-term and two long-term noise measurements were conducted along the project corridor. Ten of the short-term measurements were conducted at residential receivers and two of the measurements at schools. The long-term measurements were conducted at residential receivers. The locations of these measurement sites are shown in Figure 3.9-3. The existing noise environment in the project area is due to traffic on SR-22, Trask Avenue and local roadways.

The Trask Avenue traffic is the closest source of noise to the residential receivers in this area. The traffic noise from Trask Avenue increases the noise levels at the receiver measurement sites in the range of 1 dBA to 5 dBA with the exception of Site T-5 which is shielded from the Trask Avenue traffic by a 12-foot high developer wall.

Table 3.9-3, Existing Noise Levels at Additional Garden Grove Area Sites, includes both the existing noise levels based on measurements and the “highest noise hour” based on modeling. Please refer

to *Traffic Noise Impact Technical Report Garden Grove Addendum* (October 2002) for each detail site information.

**Table 3.9-3**
**EXISTING NOISE LEVELS AT ADDITIONAL GARDEN GROVE AREA SITES**

| Site ID No. | Site Description | Type of Development | Measured Noise Level (dBA) | Modeled Noise Level, Leq(h), dBA (highest noise hour) |
|---|---|---|---|---|
| T-1 | **9121 Trask Avenue** | Residential | 72.1 | 73 |
| T-2 | **13471 Mickey Street** | Residential | 66.6 | 69 |
| T-3 | **9331 Trask Avenue** | Residential | 69.2 | 69 |
| T-4 | **9461 Trask Avenue** | Residential | 70.7 | 71 |
| T-24A | **13471 Galway Street** | Residential | 68.5 | 71 |
| T-5 | **9732 Luders Avenue** | Residential | 55.5 | 60 |
| T-6 | **Iglesia Nueva Vida O.C.C. Christian Assembly - 9817 Trask Avenue** | Church | 69.4 | 70 |
| T-7 | **13461 Hope Street** | Residential | 63.9 | 66 |
| T-8 | **10351 Trask Avenue** | Residential | 70 | 72 |
| T-24B | **13462 Jessica Drive** | Residential | 66.7 | 68 |
| T-9 | **Mitchell Elementary School** | School | 66 | 67 |
| T-10 | **13482 Mitchell Avenue** | Residential | 64.8 | 66 |
| T-11 | **11241 Trask Avenue** | Residential | 69.4 | 71 |
| - | **Sunnyside Elementary** (Classroom 40) | School | 66 | 67 |
| - | **Sunnyside Elementary** (Classroom 25) | School | 63 | 64 |
| - | **Mitchell Elementary** (Classroom 4) | School | 70 | 70 |

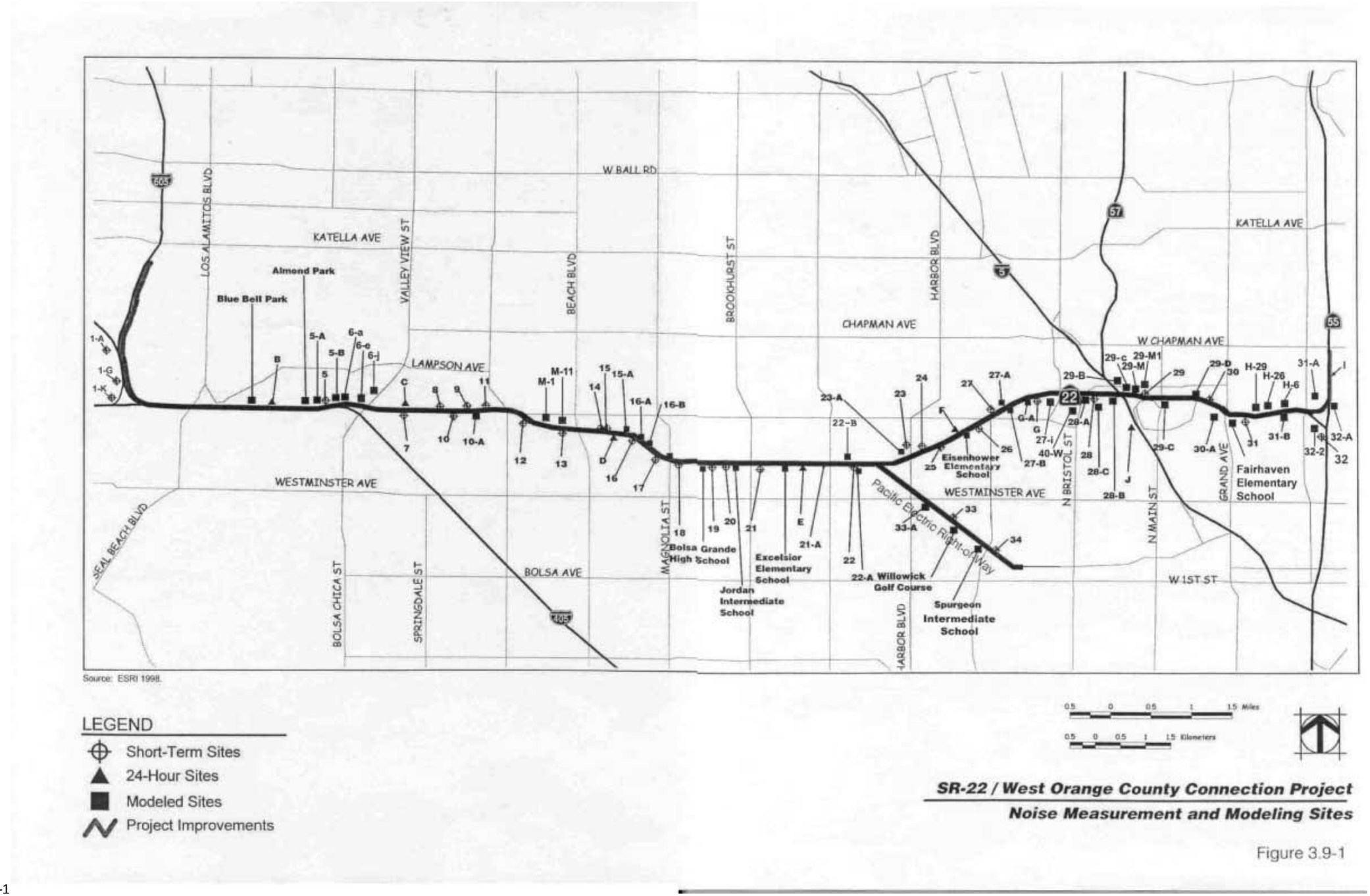
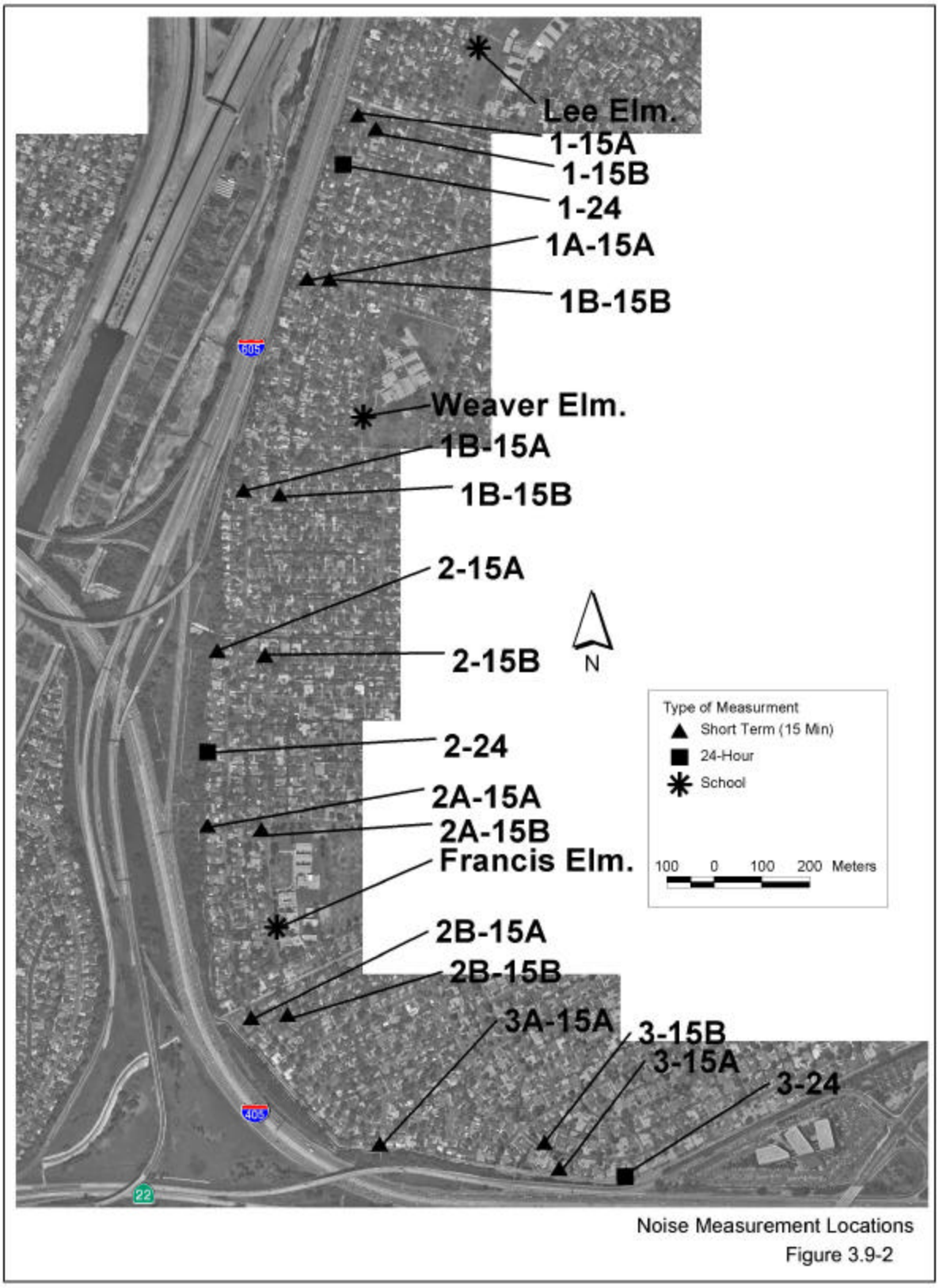
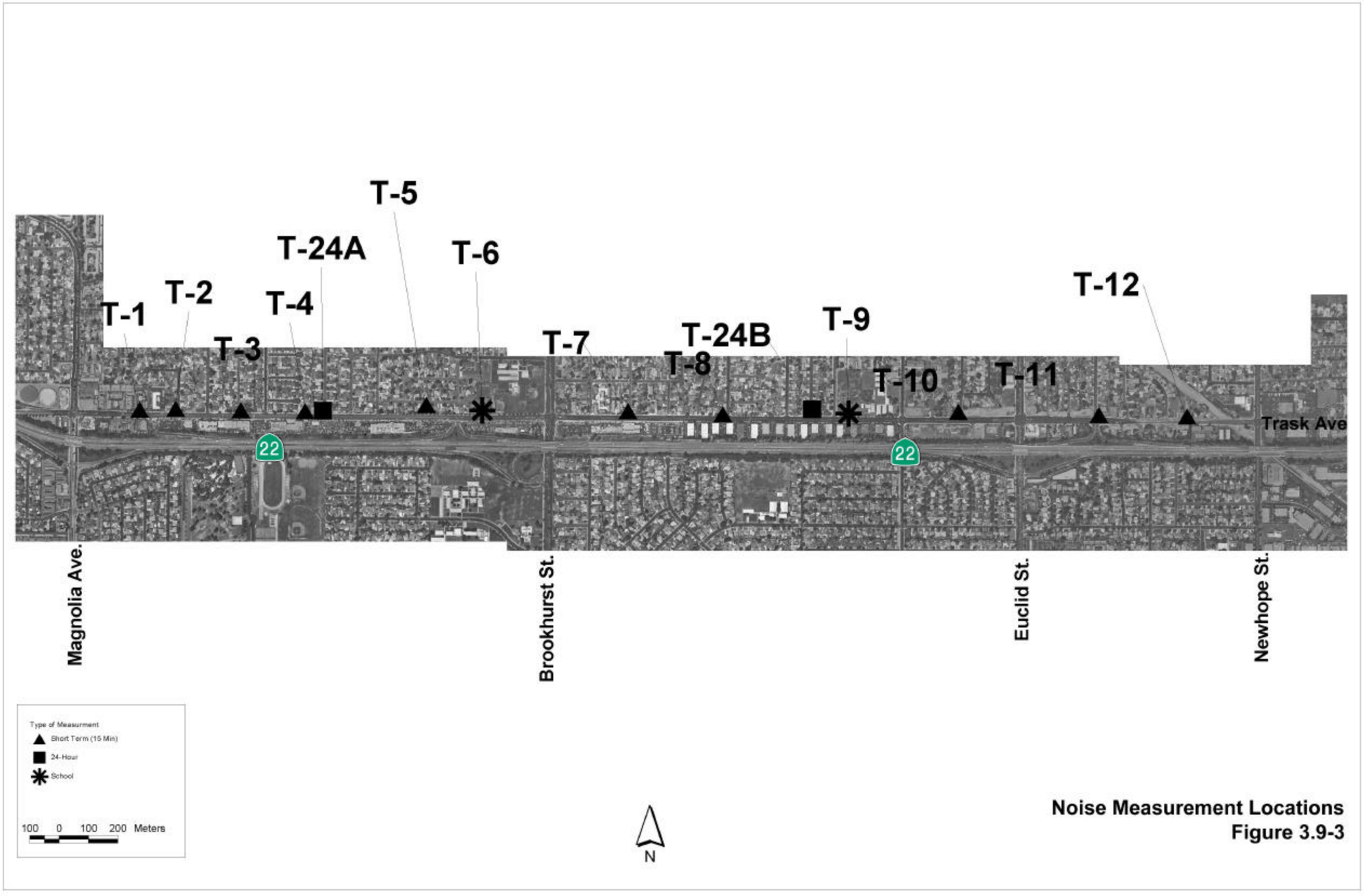

W BALL RD
KATELLA AVE
LOS ALAMITOS BLVD
VALLEY VIEW ST
BEACH BLVD
BROOKHURST ST
HARBOR BLVD
CHAPMAN AVE
W CHAPMAN AVE
LAMPSON AVE
WESTMINSTER AVE
BOLSA AVE
SEAL BEACH BLVD
BOLSA CHICA ST
SPRINGDALE ST
MAGNOLIA ST
N BRISTOL ST
N MAIN ST
GRAND AVE
W 1ST ST
Pacific Electric Right-of-Way
Almond Park
Blue Bell Park
Eisenhower Elementary School
Fairhaven Elementary School
Bolsa Grande High School
Excelsior Elementary School
Jordan Intermediate School
Willowick Golf Course
Spurgeon Intermediate School
Source: ESRI 1998.
LEGEND
Short-Term Sites
24-Hour Sites
Modeled Sites
Project Improvements
0.5 0 0.5 1 1.5 Miles
0.5 0 0.5 1 1.5 Kilometers
SR-22 / West Orange County Connection Project
Noise Measurement and Modeling Sites
Figure 3.9-1

Figure 3.9-1




Noise Measurement Locations
Figure 3.9-2




Noise Measurement Locations
Figure 3.9-3